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BACKED PANEL AND SYSTEM FOR CONNECTING BACKED PANELS

This application is a continuation of U.S. application Ser. No. 11/233,929, filed Sep. 23, 2005, which is hereby incorporated by reference in its entirety.

BACKGROUND AND SUMMARY OF THE INVENTION

The present invention relates generally to panels and, more particularly, to a backed panel and a backed panel assembly. Examples of panels that may benefit from the present invention include siding panels, wall panels, and other similar, suitable, or conventional types of panels or components. U.S. Pat. No. 6,321,500 is hereby incorporated by reference as just one example of a panel that may benefit from the present invention. Although the present invention may be described herein primarily with regard to siding panels and wall panels, it is not intended to limit the present invention to any particular type of panel or component, unless expressly claimed otherwise.

In order to enhance the thermal insulation of building structures, one or more layers or panels of insulating material may be provided between a facing panel and a building structure. Known insulated siding systems exist in many different forms. A common problem with known insulated siding systems is the joint between the sides of adjacent siding units. Simply abutting siding units that are situated side-by-side may leave an unsightly gap that may be infiltrated by wind, rain, and insects. On the other hand, overlapping the siding panels of adjacent backed siding units may result in an uneven or raised seam as a result of the presence of the backing panels. A raised or uneven seam may also detract from the appearance of the siding and create a passage for the undesired transfer of air, moisture, and insects. In addition, a raised or uneven seam may increase the risk of oil canning of the siding panels as well as delamination of the siding units. Furthermore, overlapping the siding panels may cause breakage or other damage to the underlying backing panel, which compromises the functionality of the backing panel. Thus, to achieve the desired level of integration between adjoined backed paneling units, an improved system and method of forming a lapped joint between backed panels without interference of the backing panels is needed.

The present invention provides a backed panel and a system for connecting backed panels. An exemplary embodiment of the backed panel comprises a facing panel and a backing panel, wherein the backing panel has a groove, recessed portion, or any other suitable type of relief channel. An exemplary embodiment of the relief channel may be adapted to receive a side edge portion of a facing panel of an adjacent backed panel. By providing a space to receive a side edge portion of an adjacent facing panel, an exemplary embodiment of the present invention may enable an improved lap joint to be established between adjacent backed panels.

In addition to the novel features and advantages mentioned above, other features and advantages of the present invention will be readily apparent from the following descriptions of the drawings and exemplary embodiments.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a partial perspective view of an exemplary embodiment of a backed panel of the present invention.

FIG. 2 is a partial perspective view of a panel assembly including the backed panel of FIG. 1.

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FIG. 3 is a partial perspective view of the backing panel of FIG. 1.

FIG. 4 is a rear elevation view of an exemplary embodiment of a backed panel of the present invention (approximate dimensions are given for the purpose of example only).

FIG. 5 is a partial rear elevation view of the backed panel of FIG. 4 (approximate dimensions are given for the purpose of example only).

FIG. 6A is a side elevation view of the backing panel of FIG. 4 (approximate dimensions are given for the purpose of example only).

FIG. 6B is another side elevation view of the backing panel of FIG. 4 (approximate dimensions are given for the purpose of example only).

FIG. 7 is a partial front elevation view of the backing panel of FIG. 4 (approximate dimensions are given for the purpose of example only).

FIG. 8 is a partial bottom plan view of the backing panel of FIG. 4 (approximate dimensions are given for the purpose of example only).

FIG. 9 is another side elevation view of the backing panel of FIG. 4 (approximate dimensions are given for the purpose of example only).

DETAILED DESCRIPTION OF EXEMPLARY EMBODIMENT(S)

The present invention is directed to a backed paneling unit. In FIG. 1, an exemplary embodiment of a backed paneling unit 10 (e.g., a siding unit) includes backing panel or portion 20 and facing panel or portion 30 (e.g., a siding panel), which may optionally have an attachment flange 32. Side edge portion 22 of backing panel 20 includes a relief channel 24. Relief channel 24 may be a groove, channel, or any other suitable type of recessed portion. In particular, relief channel 24 is adapted to provide a gap or space between backing panel 20 and siding panel 30 for receiving a side edge portion of a siding panel of an adjacent siding unit. As a result, an exemplary embodiment of the present invention may enable the formation of an improved lap between adjacent backed paneling units.

FIG. 2 shows an example of an assembly including siding unit 10 of FIG. 1. In this example, a lap joint is formed between siding unit 10 and siding unit 40. In particular, a side edge portion 44 of siding panel 42 of siding unit 40 is inserted into the gap between backing panel 20 and siding panel 30 that is provided by relief channel 24. Side edge portion 44 of siding panel 42 is shown in phantom because it is overlapped by siding panel 30.

Due to relief channel 24, an exemplary embodiment of the present invention may enable the formation of an improved seam between backed panels that are located side-by-side. For instance, an exemplary embodiment of the present invention may enable the seam to be significantly smoother as compared to a backed panel system that does not include a relief channel in a backing panel. In other words, displacement of siding panel 30 by side edge portion 44 may be minimized because of relief channel 24. Thus, in addition to providing a seam that may be resistant to water, air, and insect infiltration, an exemplary embodiment of the present invention may enable the formation of a seam that may improve the appearance of a siding assembly and may also mitigate delamination and oil canning of a siding unit. Furthermore, relief channel 24 may also limit damage to backing panel 20. In particular, relief channel 24 creates a gap that facilitates the insertion of side edge portion 44 under siding panel 30 without damaging backing panel 20.